

Figure 1 displays 12 histograms, labeled  $k=1$  through  $k=12$ , showing the distribution of the number of non-zero elements in the vector  $x_k$ . The x-axis represents the 'Number of non-zero elements' (ranging from 0 to 10), and the y-axis represents the 'Frequency' (ranging from 0 to 10). The distributions are roughly bell-shaped and centered around 5-6 non-zero elements.

